



SEQUENCE LISTING

<110> Jay Short
Eric Mathur
William Michael Lafferty
Nelson Barton
Kevin Chow

<120> Method of Making a Protein Polymer and Uses of the Polymer

<130> 564462010900

<140> 09/997,807

<141> 2001-11-30

<150> 60/250,426

<151> 2000-11-30

<160> 37

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 624

<212> DNA

<213> Pyrodictium abyssi

<400> 1

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caggcagtaa	gcgagccaat	agacgtagaa	agccacctcg	gcagcataac	ccccgcagcc	180
ggcgcacagg	gcagtgcga	cataggttac	gcaatagtgt	ggataaagga	ccaggtcaat	240
gatgtaaagc	tgaaggtagc	cctgcgtaac	gctgagcagc	taaagcccta	cttcaagtac	300
ctacagatac	agataacaag	cggctatgag	acgaacagca	cagctctagg	caacttcagc	360
gagaccaagg	ctgtgataag	cctcgacaac	cccagcgccg	tgatagtact	agacaaggag	420
gatatagcag	tgctctatcc	ggacaagacc	ggttacacaa	acacttcgat	atgggtaacc	480
ggtgaacctg	acaagataat	tgtctacaac	gagacaaagc	cagtagctat	actgaacttc	540
aaggccttct	acgaggctaa	ggagggtatg	ctattcgaca	gcctgccagt	gatattcaac	600
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<210> 2

<211> 207

<212> PRT

<213> Pyrodictium abyssi

<400> 2

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			20					25					30		
Ser	Phe	Tyr	Ala	Thr	Gly	Thr	Ala	Gln	Ala	Val	Ser	Glu	Pro	Ile	Asp
			35				40					45			
Val	Glu	Ser	His	Leu	Gly	Ser	Ile	Thr	Pro	Ala	Ala	Gly	Ala	Gln	Gly
			50				55					60			
Ser	Asp	Asp	Ile	Gly	Tyr	Ala	Ile	Val	Trp	Ile	Lys	Asp	Gln	Val	Asn
65					70				75					80	
Asp	Val	Lys	Leu	Lys	Val	Thr	Leu	Arg	Asn	Ala	Glu	Gln	Leu	Lys	Pro
				85					90					95	

Tyr Phe Lys Tyr Leu Gln Ile Gln Ile Thr Ser Gly Tyr Glu Thr Asn
 100 105 110
 Ser Thr Ala Leu Gly Asn Phe Ser Glu Thr Lys Ala Val Ile Ser Leu
 115 120 125
 Asp Asn Pro Ser Ala Val Ile Val Leu Asp Lys Glu Asp Ile Ala Val
 130 135 140
 Leu Tyr Pro Asp Lys Thr Gly Tyr Thr Asn Thr Ser Ile Trp Val Pro
 145 150 155 160
 Gly Glu Pro Asp Lys Ile Ile Val Tyr Asn Glu Thr Lys Pro Val Ala
 165 170 175
 Ile Leu Asn Phe Lys Ala Phe Tyr Glu Ala Lys Glu Gly Met Leu Phe
 180 185 190
 Asp Ser Leu Pro Val Ile Phe Asn Phe Gln Val Leu Gln Val Gly
 195 200 205

<210> 3
 <211> 513
 <212> DNA
 <213> Pyrodictium abyssi

<400> 3
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 ctagcaggct tcgccaccac ccagagcccg ctcaacagct tctacgccac cggcacagca 120
 gccgcaacaa gcgagccaat agacgtagag agccacctca gcagcatagc ccctgctgct 180
 ggcgcacagg gcagccagga cataggctac ttcaacgtga ccgccaagga tcaagtgaac 240
 gtgacaaaga taaaggtgac cctggctaac gctgagcagc taaagcccta cttcaagtac 300
 ctacagatag tgctaaagag cgaggtagct gacgagatca aggccgtaat aagcatagac 360
 aagcctagcg ccgtcataat actagacagc caggacttcg acagcaacaa cagagcaaag 420
 ataagcgcca ctgcctacta cgaggctaag gagggcatgc tattcgacag cctaccgcta 480
 atattcaaca tacaggtgct aagcgtcagc taa 513

<210> 4
 <211> 170
 <212> PRT
 <213> Pyrodictium abyssi

<400> 4
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 1 5 10 15
 Asp Leu Ala Leu Leu Ala Gly Phe Ala Thr Thr Gln Ser Pro Leu Asn
 20 25 30
 Ser Phe Tyr Ala Thr Gly Thr Ala Ala Ala Thr Ser Glu Pro Ile Asp
 35 40 45
 Val Glu Ser His Leu Ser Ser Ile Ala Pro Ala Ala Gly Ala Gln Gly
 50 55 60
 Ser Gln Asp Ile Gly Tyr Phe Asn Val Thr Ala Lys Asp Gln Val Asn
 65 70 75 80
 Val Thr Lys Ile Lys Val Thr Leu Ala Asn Ala Glu Gln Leu Lys Pro
 85 90 95
 Tyr Phe Lys Tyr Leu Gln Ile Val Leu Lys Ser Glu Val Ala Asp Glu
 100 105 110
 Ile Lys Ala Val Ile Ser Ile Asp Lys Pro Ser Ala Val Ile Ile Leu
 115 120 125
 Asp Ser Gln Asp Phe Asp Ser Asn Asn Arg Ala Lys Ile Ser Ala Thr
 130 135 140
 Ala Tyr Tyr Glu Ala Lys Glu Gly Met Leu Phe Asp Ser Leu Pro Leu
 145 150 155 160
 Ile Phe Asn Ile Gln Val Leu Ser Val Ser
 165 170

<210> 5
 <211> 537
 <212> DNA
 <213> Pyrodictium abyssi

<400> 5
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 ctagcaggct tcgccacgac ccagagccccg ctaagcagct tctacgccac cggcacagca 120
 caagcagtaa gcgagccaat agacgtagag agccacctag acaacaccat agcccctgct 180
 gccggtgcac agggctacaa ggacatgggc tacattaaga taactaacca gtcaaaagtt 240
 aatgtaataa agctgaaggt gactctcgct aacgccgagc agctaaagcc ctacttcgac 300
 tacctacagc tagtactcac aagcaacgcc actggcaccg acatgggttaa ggctgtgcta 360
 agcctcgaga agcctagcgc agtcataata ctagacaacg atgactacga tagcactaac 420
 aagatacagc taaaggtaga agcctactat gaggctaagg agggcatgct attcgacagc 480
 ctaccagtaa tactgaactt ccaggtagct agcgccgctt gcagtccctt gtggtga 537

<210> 6
 <211> 178
 <212> PRT
 <213> Pyrodictium abyssi

<400> 6
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 Ala Leu Ala Leu Leu Ala Gly Phe Ala Thr Thr Gln Ser Pro Leu Ser
 20 25 30
 Ser Phe Tyr Ala Thr Gly Thr Ala Gln Ala Val Ser Glu Pro Ile Asp
 35 40 45
 Val Glu Ser His Leu Asp Asn Thr Ile Ala Pro Ala Ala Gly Ala Gln
 50 55 60
 Gly Tyr Lys Asp Met Gly Tyr Ile Lys Ile Thr Asn Gln Ser Lys Val
 65 70 75 80
 Asn Val Ile Lys Leu Lys Val Thr Leu Ala Asn Ala Glu Gln Leu Lys
 85 90 95
 Pro Tyr Phe Asp Tyr Leu Gln Leu Val Leu Thr Ser Asn Ala Thr Gly
 100 105 110
 Thr Asp Met Val Lys Ala Val Leu Ser Leu Glu Lys Pro Ser Ala Val
 115 120 125
 Ile Ile Leu Asp Asn Asp Asp Tyr Asp Ser Thr Asn Lys Ile Gln Leu
 130 135 140
 Lys Val Glu Ala Tyr Tyr Glu Ala Lys Glu Gly Met Leu Phe Asp Ser
 145 150 155 160
 Leu Pro Val Ile Leu Asn Phe Gln Val Leu Ser Ala Ala Cys Ser Pro
 165 170 175
 Leu Trp

<210> 7
 <211> 395
 <212> DNA
 <213> Pyrodictium abyssi

<400> 7
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 ctcggtacgc taaatactgc cgctggtgca cagggtgaagc agacgctagg agacataaca 120
 atatatgcmc acaatgacgt gaacataaca aagctaaagg tcacgcttgc taacgctgca 180
 cagctaagac catacttcaa gtacctgata ataaagctag taagcctgga cagcaacggc 240
 aacgagtccg aggaaaaggg catgataact ctatggaagc cttacgccgt gataatacta 300

gaccatgaag atttcaacaa cyacatcgac aatgacggca acaatgacgc caagataagg 360
gttgtagcct actatgaggc taaggagggt atgct 395

<210> 8
<211> 131
<212> PRT
<213> Pyrodictium abyssi

<400> 8
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Val Val Ser Ser Leu Gly Thr Leu Asn Thr Ala Ala Gly Ala Gln Gly
20 25 30
Lys Gln Thr Leu Gly Asp Ile Thr Ile Tyr Ala His Asn Asp Val Asn
35 40 45
Ile Thr Lys Leu Lys Val Thr Leu Ala Asn Ala Ala Gln Leu Arg Pro
50 55 60
Tyr Phe Lys Tyr Leu Ile Ile Lys Leu Val Ser Leu Asp Ser Asn Gly
65 70 75 80
Asn Glu Ser Glu Glu Lys Gly Met Ile Thr Leu Trp Lys Pro Tyr Ala
85 90 95
Val Ile Ile Leu Asp His Glu Asp Phe Asn Asn Asp Ile Asp Asn Asp
100 105 110
Gly Asn Asn Asp Ala Lys Ile Arg Val Val Ala Tyr Tyr Glu Ala Lys
115 120 125
Glu Gly Met
130

<210> 9
<211> 372
<212> DNA
<213> Pyrodictium abyssi

<400> 9
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acaatagaga acaagactga cgtgaacgtt gtgaagctga agataaccct cgccaacgct 180
gagcagctaa agccctactt cgactaccta cagatagtgc taaagagcgt tgacagcaac 240
gagatcaagg ctgtgctaag cctcgagaag cccagcgagc tcataatact ggacaacgag 300
gacttccagg gcggcgacaa ccagtgccag atagacgcca ccgcctacta cgaggctaag 360
gagggtatgc ta 372

<210> 10
<211> 124
<212> PRT
<213> Pyrodictium abyssi

<400> 10
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1 5 10 15
Val Val Ser Asn Leu Asn Thr Ala Ile Ala Pro Ala Ala Gly Ala Gln
20 25 30
Gly Ser Val Gly Ile Gly Ser Ile Thr Ile Glu Asn Lys Thr Asp Val
35 40 45
Asn Val Val Lys Leu Lys Ile Thr Leu Ala Asn Ala Glu Gln Leu Lys
50 55 60
Pro Tyr Phe Asp Tyr Leu Gln Ile Val Leu Lys Ser Val Asp Ser Asn
65 70 75 80
Glu Ile Lys Ala Val Leu Ser Leu Glu Lys Pro Ser Ala Val Ile Ile

				85					90					95					
Leu	Asp	Asn	Glu	Asp	Phe	Gln	Gly	Gly	Asp	Asn	Gln	Cys	Gln	Ile	Asp				
			100					105					110						
Ala	Thr	Ala	Tyr	Tyr	Glu	Ala	Lys	Glu	Gly	Met	Leu								
			115				120												

<210> 11
 <211> 448
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> consensus sequence

<400> 11
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 cccagagccc ctacagcttc tacgccaccg gcacagcaca ggcagtaagc gagccaatag 120
 acgtagaaag ccacctcaca catagcccct gctgccggcg cacagggcag caggacatag 180
 gctacataaa ataacaagat agtgaacgta taaagctgaa ggtgaccctg ctaacgctga 240
 gcagctaaaag ccctacttca agtacctaca gatagtgtta aaagcgacag caggcacacg 300
 agaaggcgtg ataagcctcg agaagcctag cgccgtcata atactagaca acgaggactt 360
 cgaagcaca cagaaagaga agcaatagcc tactacgagg ctaaggaggg tatgctattc 420
 gacagcctcc tatataactc aggtctgt 448

<210> 12
 <211> 140
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> consensus sequence

<400> 12
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 Leu Leu Ala Gly Phe Ala Thr Thr Gln Ser Pro Leu Ser Phe Tyr Ala
 20 25 30
 Thr Gly Thr Ala Gln Ala Val Ser Glu Pro Ile Asp Val Glu Ser His
 35 40 45
 Leu Ser Ile Ala Pro Ala Ala Gly Ala Gln Gly Ser Asp Ile Gly Tyr
 50 55 60
 Ile Ile Lys Val Asn Val Val Lys Leu Lys Val Thr Leu Ala Asn Ala
 65 70 75 80
 Glu Gln Leu Lys Pro Tyr Phe Lys Tyr Leu Gln Ile Val Leu Ser Ser
 85 90 95
 Glu Ile Lys Ala Val Ile Ser Leu Asp Lys Pro Ser Ala Val Ile Ile
 100 105 110
 Leu Asp Glu Asp Phe Ala Ile Ala Tyr Tyr Glu Ala Lys Glu Gly Met
 115 120 125
 Leu Phe Asp Ser Leu Pro Val Ile Asn Gln Val Leu
 130 135 140

<210> 13
 <211> 5
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Linker peptide

<400> 13
 Gly Gly Gly Gly Ser
 1 5

<210> 14
 <211> 10
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Polynucleotide sequence of a restriction site

<400> 14
 cgcgctggac 10

<210> 15
 <211> 10
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Primer

<400> 15
 aaggaggag 10

<210> 16
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Primer

<400> 16
 ctagaagaga ggagaaaacc atg 23

<210> 17
 <211> 21
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Primer

<400> 17
 gatcaaaggc ggcctgcag g 21

<210> 18
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Primer

<400> 18
 ctagaaggga ggagaaaacc atg 23

<210> 19
 <211> 21
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Primer

 <400> 19
 gatcaaaggc gcgcctgcag g 21

 <210> 20
 <211> 10
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Polynucleotide sequence of a cleavage site

 <221> unsure
 <222> (0)...(0)
 <223> N = A, G, C or T

 <400> 20
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 <210> 21
 <211> 22
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Oligonucleotide

 <400> 21
 gccagggttt tcccagtcac ga 22

 <210> 22
 <211> 23
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Oligonucleotide

 <400> 22
 agcggataac aatttcacac agg 23

 <210> 23
 <211> 17
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Oligonucleotide

 <400> 23
 attaaccctc actaaag 17

<210> 24
 <211> 21
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Oligonucleotide

 <400> 24
 taatacgact cactataggg g 21

 <210> 25
 <211> 18
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Oligonucleotide

 <400> 25
 ctagttattg ctcagcgg 18

 <210> 26
 <211> 15
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Oligonucleotide

 <400> 26
 cagagccccg ctcaa 15

 <210> 27
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Oligonucleotide

 <400> 27
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 <210> 28
 <211> 18
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Oligonucleotide

 <400> 28
 cagcttctac gccaccgg 18

 <210> 29
 <211> 21
 <212> DNA

<213> Artificial Sequence
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 <223> Oligonucleotide
 <400> 29
 tgtgaagtac acaaccctag c 21
 <210> 30
 <211> 16
 <212> DNA
 <213> Artificial Sequence
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 <223> Oligonucleotide
 <400> 30
 gcgccggctg cggggg 16
 <210> 31
 <211> 19
 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> Oligonucleotide
 <400> 31
 ctgtgctgta ccggtggcg 19
 <210> 32
 <211> 20
 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> Oligonucleotide
 <400> 32
 agcataccct ccttagcctc 20
 <210> 33
 <211> 30
 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> Primer
 <400> 33
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 <210> 34
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 <212> DNA
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<400> 34	
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<210> 35	
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<212> DNA	
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<400> 35	
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<223> Primer	
<400> 36	
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<210> 37	
<211> 24	
<212> DNA	
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<400> 37	
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